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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,952	10/02/2003	Osamu Saito	107355-00092	5901

7590

11/29/2005

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EXAMINER

BOTTORFF, CHRISTOPHER

ART UNIT

PAPER NUMBER

3618

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/675,952	Applicant(s) SAITO ET AL.	
	Examiner Christopher Bottorff	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 5-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/2/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of hybrid vehicle species I and control operation species A, as disclosed in relation to Figures 1-3 and defined in claims 1, 3, and 4, in the reply filed on November 10, 2005 is acknowledged.

Claims 2 and 5-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on October 2, 2003 was considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunaga et al. US 6,114,828 in view of Aoki et al. US 5,857,755.

Matsunaga et al. disclose an apparatus for controlling a driving force of an electric vehicle comprising a traction motor 5 and a controller 12. The controller includes a driving force calculating section (see column 4, lines 56-60, and note that the actuation of an accelerator is indicative of the driving state of the vehicle), a motor controlling section (see column 4, lines 61-65 and column 7, lines 8-15), and a revolution number detecting section (see column 4, lines 49-53, and note that detecting the number of revolutions is inherent to detecting the revolutions per minute). The driving force calculating section calculates the driving force of the traction motor on the basis of an operating state of a vehicle. See column 4, lines 56-60, and note that when the accelerator is actuated, the demanded amount of motor torque is determined and utilized by controller 12. The motor controlling section controls the traction motor on the basis of the driving force calculated by the driving force calculating section. See column 4, lines 61-65 and column 7, lines 8-15. The revolution number detecting section detects a number of revolutions of the traction motor. See column 4, lines 49-53.

The motor controlling section reduces the amount of the driving force of the traction motor that is output from the traction motor when: the driving duration time period of the traction motor reaches a predetermined time period, a change of the number of revolutions detected by the revolution number detecting section is equal to or smaller than a predetermined value, and the driving force calculated by the driving force

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calculating section is equal to or larger than a predetermined value. See column 4, lines 8-13 and 49-65.

Matsunaga et al. do not disclose that the apparatus comprises a transmitting section disposed between the traction motor and a drive wheel and that transmits the driving force of the traction motor to the drive wheel. However, Aoki et al. teach the desirability of disposing a transmitting section 3 between a traction motor 2 and a drive wheel W_f that transmits the driving force of the traction motor 2 to the drive wheel W_f . See Figure 1. From the teachings of Aoki et al., providing a transmitting section between a drive wheel and the traction motor of Matsunaga et al. would have been obvious to one of ordinary skill in the art at the time the invention was made. This would help propel the vehicle by delivering the torque produced by the motor to the wheels. Also, the reduced amount of the driving force of the traction motor that is output from the traction motor would be transmitted through the transmitting section as a reduced transmission amount.

Allowable Subject Matter

Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not teach or suggest calculating the driving force of a motor on the basis of the inclination angle of a road surface, as defined in claim 3, or controlling the transmission of driving force of a motor on the basis of a continuous energization

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time period of a stator winding, as defined in claim 4. These features, in combination with the further limitations of claims 1, 3, and 4, distinguish the claimed invention over the prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ooyama et al., Miller et al., Judkins, Wakitani et al., and Kowatari et al. disclose devices that control the driving force of a vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Bottorff whose telephone number is (571) 272-6692. The examiner can normally be reached on Mon.-Fri. 7:30 a.m. - 4:00 p.m..

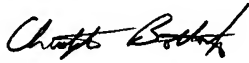
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Chris Bottorff", with a stylized flourish at the end.

Christopher Bottorff